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BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA,
CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPUS, DDFB,
DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 19:37:46 ON
12 JUN 2003

SEA YEASTS

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372 FILE CONFSCI
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1116 FILE DRUGU
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8 FILE FOREGE
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52547 FILE GENBANK
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L1 QUE YEASTS

FILE 'CAPPLUS, FSTA, MEDLINE, CABA, BIOSIS, LIFESCI, SCISEARCH, AGRICOLA,
FROSTI' ENTERED AT 19:38:58 ON 12 JUN 2003

L2 2 S L1 AND (KETOGLULONIC ACID OR KLG)
L3 2 DUP REM L2 (0 DUPLICATES REMOVED)
L4 692 S L1 AND (ASCORBIC ACID OR VITAMIN C)
L5 20 S L4 AND (CANDIDA BLANKII OR CRYPTO?)
L6 11 DUP REM L5 (9 DUPLICATES REMOVED)

=> s l4 and (KLG or keto-gulonic acid)
L7 0 L4 AND (KLG OR KETO-GULONIC ACID)

L6 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 3
ACCESSION NUMBER: 1986:587385 CAPLUS
DOCUMENT NUMBER: 105:187385
TITLE: Ascorbic acid specific utilization
by some yeasts
AUTHOR(S): Costamagna, Lucia; Rosi, Iolanda; Garuccio, Isabella;
Arrigoni, Oreste
CORPORATE SOURCE: Dip. Biol. Veg., Univ. Perugia, Perugia, Italy
SOURCE: Canadian Journal of Microbiology (1986), 32(9), 756-8
CODEN: CJMIAZ; ISSN: 0008-4166
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Some 180 strains of yeasts belonging to 17 genera and 53 species were screened for their ability to grow on ascorbic acid and isoascorbic acid as the sole C source. Most of the tested strains (157) were unable to grow on either compd. Strains of 7 species of the genus *Cryptococcus*, of 2 *Candida* species, of *Filobasidiella neoformans*, *Trichosporon cutaneum*, *Lipomyces starkeyi*, *Hansenula capsulata*, and 1 strain of *Aureobasidium pullulans* grew on ascorbic as well as on isoascorbic acid. Conversely, 4 strains of *A. pullulans*, *Candida blankii*, and *Cryptococcus dimennae* could use only ascorbic acid for growth

L6 ANSWER 7 OF 11 MEDLINE
ACCESSION NUMBER: 91183364 MEDLINE
DOCUMENT NUMBER: 91183364 PubMed ID: 2081332
TITLE: Utilization by yeasts of D-glucarate,
galactarate, and L-tartarate is uncommon and occurs in
strains of *Cryptococcus* and Trichosporon.
AUTHOR: Schneider H; Biely P; Latta R; Lee H; Dorscheid D;
Levy-Rick S
CORPORATE SOURCE: Division of Biological Sciences, National Research Council
of Canada, Ottawa, Ont.
SOURCE: CANADIAN JOURNAL OF MICROBIOLOGY, (1990 Dec) 36 (12) 856-8.
Journal code: 0372707. ISSN: 0008-4166.
PUB. COUNTRY: Canada
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199105
ENTRY DATE: Entered STN: 19910526
Last Updated on STN: 19910526
Entered Medline: 19910507

AB In 38 yeast genera tested, utilization of D-glucarate was uncommon,
occurring with only 10 strains out of 373. The ability was prominent
among *Cryptococcus* strains, with 8 out of 8 tested being
positive, including the pathogen *Cryptococcus neoformans*. The
ability was present also in Trichosporon where 2 out of the 4 strains
tested were positive. There was a correlation between ability to utilize
D-glucarate, galactarate, L-tartarate, and D-glucuronate. Use of
L-ascorbate occurred in more genera than use of D-glucarate, but all
strains that grew on D-glucarate grew on L-ascorbate. The utilization of
certain hydroxylated carboxylates by strains, mainly found in two genera,
is of interest in identifying the catabolic pathways involved, in
taxonomic studies, and in developing rapid methods of yeast
identification.

L6 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:107577 CAPLUS
DOCUMENT NUMBER: 136:162336
TITLE: Ascorbic acid production from yeasts
INVENTOR(S): Porro, Danilo; Sauer, Michael
PATENT ASSIGNEE(S): Biopolo S.C.A.R.L., Italy; Whalley, Kevin
SOURCE: PCT Int. Appl., 95 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002010425	A2	20020207	WO 2001-GB3485	20010802
WO 2002010425	A3	20021024		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1307578	A2	20030507	EP 2001-953269	20010802
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRIORITY APPLN. INFO.:			US 2000-630983	A 20000802
			WO 2001-GB3485	W 20010802

AB Recombinant yeasts are provided for the prodn. of L-ascorbic acid from various ascorbic acid precursors. The recombinant yeasts are transformed by genes encoding L-galactose dehydrogenase, L-galactono-1,4-lactone dehydrogenase, D-arabinose dehydrogenase, L-gulono-1,4-lactone oxidase, and aldonolactonase. The preferred precursors are dextrose, L-galactose, L-galactono-1,4-lactone, L-gulono-1,4-lactone, or L-gulonic acid.

L6 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2003 ACS

DUPPLICATE 1

ACCESSION NUMBER: 1997:282679 CAPLUS

DOCUMENT NUMBER: 126:261354

TITLE: Influence of L-galactonic acid .gamma.-lactone on
ascorbate production in some yeasts

AUTHOR(S): Onofri, S.; Poerio, E.; Serangeli, P.; Tosi, S.;
Garuccio, I.; Arrigoni, O.

CORPORATE SOURCE: Dipartimento di Scienze Ambientali, Universita della
Tuscia, Viterbo, I-01100, Italy

SOURCE: Antonie van Leeuwenhoek (1997), 71(3), 277-280
CODEN: ALJMAO; ISSN: 0003-6072

PUBLISHER: Kluwer

DOCUMENT TYPE: Journal

LANGUAGE: English

AB L-galactonic acid .gamma.-lactone appear to influence ascorbic
acid prodn. in strains of *Saccharomyces cerevisiae*, *Clavispora*
lusitaniae, *Cryptococcus terreus*, *Pichia fermentans* in which
this is undetected whenever glucose represents the sole carbon source.
Cryptococcus terreus (strains DBVP 6012 and 6242) does not show
ascorbic acid prodn. either in presence or in the
absence of L-galactonic acid .gamma.-lactone. This feature is probably
connected to the insensibility of the strain to the lycorine, an alkaloid
which commonly inhibits cell division probably by blocking L-galactonic
acid .gamma.-lactone conversion into ascorbate.

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Terms	Documents
L2 same (Candida or Cryptococcus)	13

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US Pre-Grant Publication Full-Text Database
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Derwent World Patents Index

Database: IBM Technical Disclosure Bulletins**Search:**[Refine Search](#)[Recall Text](#)[Clear](#)**Search History****DATE:** Friday, June 13, 2003 [Printable Copy](#) [Create Case](#)**Set Name** Query**Hit Count** Set Name
result set*DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ*

<u>L3</u>	L2 same (Candida or Cryptococcus)	13	<u>L3</u>
<u>L2</u>	L1 same yeast	1002	<u>L2</u>
<u>L1</u>	ascorbic acid or vitamin adj c.u/c.	51727	<u>L1</u>

END OF SEARCH HISTORY

WEST[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 13 of 13 returned.**

1. Document ID: US 20030068317 A1

L3: Entry 1 of 13

File: PGPB

Apr 10, 2003

PGPUB-DOCUMENT-NUMBER: 20030068317

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030068317 A1

TITLE: High capacity methods for separation, purification, concentration, immobilization and synthesis of compounds and applications based thereupon

PUBLICATION-DATE: April 10, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Lee, William	Cambridge	MA	US	
Saito, Kyoichi	Tokyo		JP	

US-CL-CURRENT: 424/140.1; 435/287.2, 435/6, 435/7.9[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Desc](#) | [Image](#)

2. Document ID: US 20020090689 A1

L3: Entry 2 of 13

File: PGPB

Jul 11, 2002

PGPUB-DOCUMENT-NUMBER: 20020090689

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020090689 A1

TITLE: Production of ascorbic acid

PUBLICATION-DATE: July 11, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Kumar, Manoj	Fremont	CA	US	

US-CL-CURRENT: 435/138; 435/254.2, 435/254.22[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Desc](#) | [Image](#)

3. Document ID: US 20020090688 A1

L3: Entry 3 of 13

File: PGPB

Jul 11, 2002

PGPUB-DOCUMENT-NUMBER: 20020090688

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020090688 A1

TITLE: Production of ascorbic acid

PUBLICATION-DATE: July 11, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Kumar, Manoj	Fremont	CA	US	

US-CL-CURRENT: 435/138; 435/254.1, 435/254.22

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#) [Claims](#) [KMC](#) [Draw Desc](#) [Image](#)

4. Document ID: US 20020076771 A1

L3: Entry 4 of 13

File: PGPB

Jun 20, 2002

PGPUB-DOCUMENT-NUMBER: 20020076771

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020076771 A1

TITLE: Production of ascorbic acid

PUBLICATION-DATE: June 20, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Kumar, Manoj	Fremont	CA	US	

US-CL-CURRENT: 435/126; 435/254.2

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#) [Claims](#) [KMC](#) [Draw Desc](#) [Image](#)

5. Document ID: US 6358715 B1

L3: Entry 5 of 13

File: USPT

Mar 19, 2002

US-PAT-NO: 6358715

DOCUMENT-IDENTIFIER: US 6358715 B1

TITLE: Production of ascorbic acid

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#) [KMC](#) [Draw Desc](#) [Image](#)

6. Document ID: US 4916068 A

L3: Entry 6 of 13

File: USPT

Apr 10, 1990

US-PAT-NO: 4916068

DOCUMENT-IDENTIFIER: US 4916068 A

** See image for Certificate of Correction **

TITLE: Bioconversion production of ascorbic acid with L-galactono-1,4-oxidase

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#)[KMC](#) [Draw Desc](#) [Image](#) 7. Document ID: US 4595659 A

L3: Entry 7 of 13

File: USPT

Jun 17, 1986

US-PAT-NO: 4595659

DOCUMENT-IDENTIFIER: US 4595659 A

TITLE: Fermentation production of ascorbic acid from L-galactonic substrate

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#)[KMC](#) [Draw Desc](#) [Image](#) 8. Document ID: RU 2177695 C2

L3: Entry 8 of 13

File: DWPI

Jan 10, 2002

DERWENT-ACC-NO: 2002-178222

DERWENT-WEEK: 200223

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TITLE: Food additive krilasorb

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#)[KMC](#) [Draw Desc](#) [Image](#) 9. Document ID: JP 08243378 A

L3: Entry 9 of 13

File: DWPI

Sep 24, 1996

DERWENT-ACC-NO: 1996-480344

DERWENT-WEEK: 199648

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TITLE: Prödn. of microcapsules for food - by treating yeast with enzyme then
treating with aq. acidic soln. then enveloping required material into yeast cells[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#)[KMC](#) [Draw Desc](#) [Clip Img](#) [Image](#) 10. Document ID: JP 03168098 A JP 94069394 B2

L3: Entry 10 of 13

File: DWPI

Jul 19, 1991

DERWENT-ACC-NO: 1991-257193

DERWENT-WEEK: 199135

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TITLE: Semi-fluidised medium for Trichomoniasis diagnosis - includes neutral red to
indicate existence of Trichomonas in sample by examining colour change of
oxidn.-redn. potential after culture[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#)[KMC](#) [Draw Desc](#) [Image](#)

11. Document ID: EP 262669 A US 4904485 A JP 02273137 A JP 2528674 B2

L3: Entry 11 of 13

File: DWPI

Apr 6, 1988

DERWENT-ACC-NO: 1988-093191

DERWENT-WEEK: 199718

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TITLE: Fat compsns. for use in bakery or confectionery - contg. aq. phase with disrupted yeast cells, fat, and emulsifier

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#)[KIMC](#) [Drawn Desc](#) [Image](#) 12. Document ID: WO 8501745 A DK 8502802 A EP 146239 A JP 61500201 W US

4595659 A US 4916068 A

L3: Entry 12 of 13

File: DWPI

Apr 25, 1985

DERWENT-ACC-NO: 1985-110361

DERWENT-WEEK: 198518

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TITLE: Fermentative ascorbic acid prodn. from galactonic acid derivs. - using over-productive microorganisms esp. Candida norvegensis mutants

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#)[KIMC](#) [Drawn Desc](#) [Image](#) 13. Document ID: JP 58170485 A JP 84034357 B

L3: Entry 13 of 13

File: DWPI

Oct 7, 1983

DERWENT-ACC-NO: 1983-817430

DERWENT-WEEK: 198346

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TITLE: Microbial prepn. of sorbitol - comprises anaerobic cultivation of candida yeast in medium contg. pentose and reacting with glucose in presence of NADPH

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#)[KIMC](#) [Drawn Desc](#) [Image](#)[Generate Collection](#)[Print](#)

Terms	Documents
L2 same (Candida or Cryptococcus)	13

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